

### **REMARKS**

This paper responds to the Office Action mailed on June 16, 2006.

Claims 1, 7, 18, 24, 31, 36 and 42 are amended, no claims are canceled; as a result, claims 1-46 are now pending in this application.

#### **§112 Rejection of the Claims**

Claim 42 was rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness. Claim 42 has been amended to provide the proper antecedent basis. This amendment does not narrow the claim and merely clarifies the claim. Withdrawal of the rejection is requested.

#### **§102 Rejection of the Claims**

Claims 15-29, 31-34, 36-40 and 42-45 were rejected under 35 U.S.C. § 102(b) as anticipated by WO 95/06285 to Petersen (hereinafter, "the Peterson reference"). Applicants disagree with the stated grounds of rejection and desire to further clarify various distinctions of the present invention over the cited art. Reconsideration of the present application is therefore requested in light of the present amendment and following remarks.

In the following discussion, the disclosed embodiments of the invention may be discussed in comparison to the prior art. It is understood, however, that any discussion of the disclosed embodiments, as well as any discussion of the differences between the disclosed embodiments of the present invention and the prior art do not define the scope or interpretation of any of the claims. Instead, such discussed differences, if presented, are offered merely to help the Examiner appreciate important claim distinctions as they are discussed.

The Peterson reference discloses a data aligner having a write data aligner and a read data aligner. The write data aligner permits writing a fixed length word to a buffer from bytes of data received from a host data bus, as shown in Figure 1. With reference also to Table 1, the write data aligner is operable to stack the data units received from the host so that no gaps occur. Similarly, the read data aligner is shown in Figure 2. The read data aligner is configured to align data received from a buffer so that data units appear on data segment lanes of a host data bus in a manner specified by the host. In general, the data received from a buffer is arbitrarily aligned.

The Peterson reference does not disclose or suggest generating a header that is included with the data units. In contrast, the various embodiments of the present application disclose forming a header portion that may be sent along with the data in order to identify the data (page 16, 1<sup>st</sup> paragraph). With reference to Figure 5 of the present application, the first data being transferred includes a header 550, which is positioned in a lane 0. Other headers may be positioned at other locations during the transaction. For example, in Figure 5, a header is also positioned in lane 1 following the first data transfer. Although the foregoing headers consume not more than a single lane, the header may also consume more than one lane, if desired.

With regard to the Examiner's assertion of inherency, the Examiner is reminded that the fact that a certain result or characteristic *may* occur or be present in the prior art is not sufficient to establish inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). To establish inherency, the cited extrinsic evidence must make clear that the missing descriptive matter *is necessarily present* in the thing described in the reference, and that it would be so recognized by persons of ordinary skill in the art. *In re Oelrich*, 666F.2d 578, 581-582, 212 USPQ 323, 326 (CCPA 1981). Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances *is not sufficient*. *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-1951 (Fed. Cir. 1999). Accordingly, with respect to the Examiner's assertion of inherency with regard to selected elements in independent claim 15, Applicants disagree with the Examiner's position, and respectfully assert that the selected elements are not, in fact, inherently taught in Peterson. Applicants therefore maintain that claim 15 is presently allowable over the Peterson reference.

Turning now to the claims, differences between the claim language and the applied art will be specifically pointed out. Claim 18, as amended, recites in pertinent part: "An apparatus for sending data over a communications bus, the apparatus comprising... *providing a header for at least one of the first source data and the second source data...*". (Emphasis added). The Peterson reference does not disclose this. Claim 18 is therefore allowable over the Peterson reference. Claims depending from claim 18 are also allowable based upon the allowable form of the base claim, and further in view of the additional limitations recited in the dependent claims.

Claim 24, as amended, recites in pertinent part: “A method for sending data on a communications bus, comprising... arranging a first portion of first source data within a data block structure during a first processing period, wherein the data block structure includes a fixed number of contiguous, configurable bits *and further wherein the first portion of the first source data includes a first header portion*... arranging a first portion of second source data within a second section of the data block structure during the second processing period, wherein the second section is contiguous with the first section, and the second section includes a second set of contiguous bits, *wherein the first portion of the second source data includes a second header portion*...”. (Emphasis added). Again, the Peterson reference fails to disclose this. Claim 24 is therefore allowable over the Peterson reference. Claims depending from claim 24 are also allowable based upon the allowable form of the base claim, and further in view of the additional limitations recited in the dependent claims.

Claim 31, as amended, recites in pertinent part: “A method, comprising... *generating a header for at least one of the first source data and the second source data*...”. (Emphasis added). Peterson simply does not disclose this. Claim 31 is therefore allowable over the Peterson reference. Claims depending from claim 31 are also allowable based upon the allowable form of the base claim, and further in view of the additional limitations recited in the dependent claims.

Claim 36, as amended, recites in pertinent part: “ A method comprising... arranging first source data from a first source within a first section of a data block structure, *wherein the first source data includes a first header portion*, and wherein the data block structure includes a fixed number of contiguous, configurable bits, and data within the data block structure is periodically sent out on a communications bus...determining that second source data from a second source is available to be sent over the communications bus, *wherein the second source data includes a second header portion*...arranging the at least a portion of the second source data within the data block structure according to the indication, resulting in the at least a portion of the second source data occupying a second section of the data block that is contiguous with an end of the first section, *wherein the second header portion is positioned between the second section and the end of the first section*...”. (Emphasis added). Yet again, the Peterson reference does not disclose this. Accordingly, claim 36 is therefore allowable over the Peterson reference. Claims

depending from claim 36 are also allowable based upon the allowable form of the base claim, and further in view of the additional limitations recited in the dependent claims.

Finally, claim 42 recites in pertinent part, “A method comprising...arranging first source data within a first section of a data block structure, *wherein the first source data includes a first header portion*, and wherein the data block structure includes fixed number of contiguous, configurable bits...receiving a request to send second source data over ~~the~~ a communications bus, *wherein the second source data includes a second header portion...*”. (Emphasis added). Again, Peterson simply does not disclose this. If the undersigned has missed a relevant teaching, the Examiner is requested to specifically point to where the relevant teaching may be found. Claim 42 is therefore allowable over the Peterson reference. Claims depending from claim 42 are also allowable based upon the allowable form of the base claim, and further in view of the additional limitations recited in the dependent claims.

### §103 Rejection of the Claims

Claims 1-8 and 12-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,809,253 to Gallagher et al. (herein after “the Gallagher reference”) in view of the Petersen reference. The Gallagher reference is relied upon to disclose multiple memory modules that are operatively coupled through a communications bus. Gallagher does not disclose or fairly suggest the teaching missing from the Peterson reference, that includes, *inter alia*, generating a header for at least one of the first source data and the second source data.

Turning again to the claims, differences between the claim language and the applied references will be pointed out. Claim 1, as amended, recites in pertinent part, “An electronic system comprising...a processor, which generates and sends one or more memory access requests...and...multiple memory modules, operatively coupled together through a communications bus, which return data requested in the one or more memory access requests, wherein each of the multiple memory modules is a data source, and a memory module of the multiple memory modules...determines that first source data and second source data are available...[and]...*generates a header for at least one of the first source data and the second source data...*”. (Emphasis added). Neither of the applied references, either singly, or in any motivated fashion, discloses this. Accordingly, claim 1 is allowable over the cited references.

Claims depending from claim 1 are also now allowable over the cited references, based upon the allowable form of the base claim and further in view of the additional limitations recited in the dependent claims.

Claim 7, as amended, recites in pertinent part: “) A memory module comprising...one or more memory storage units for storing local data...and...a hub, operatively coupled to the one or more memory storage units and to a communications bus over which the hub can receive downstream data from one or more other hubs, wherein the hub...determines that first source data and second source data are available...[and]...*generates a header for at least one of the first source data and the second source data...*”.(Emphasis added). Again, the applied references do not disclose this, either singly or in any motivated combination. Claim 7 is therefore allowable over the cited references. Claims depending from claim 7 are also now allowable over the cited references, based upon the allowable form of the base claim and further in view of the additional limitations recited in the dependent claims.

Claims 9 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Gallagher reference and the Petersen reference as applied to claim 7 above, and further in view of U.S. Published Application No. 2002/0167829 to Friedman et al. (herein after “the Friedman reference”). The Friedman reference is cited solely for disclosing a dynamic random access memory (DRAM). Applicants maintain that the Friedman reference fails to provide the disclosure missing from the Peterson and Gallagher references, as discussed in greater detail above. Claims 9 and 10 are therefore allowable.

Claim 11 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the Gallagher reference and the Petersen reference as applied to claim 7 above, and further in view of U.S. Published Application No. 2001/0016877 to Dancs et al. (herein after “the Dancs reference”). The Dancs reference is cited solely for disclosing a read-only memory (ROM). Applicants maintain that the Dancs reference fails to provide the disclosure missing from the Peterson and Gallagher references. Claim 11 is therefore allowable.

Claims 30, 35, 41 and 46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Petersen reference in view of U.S. Published Application No. 2001/0035845 to Zwern (herein after “the Zwern reference”). Zwern is cited for disclosing a custom software module.

Applicants maintain that the Zwern reference fails to provide the disclosure missing from the Peterson reference. Claims 30, 35, 41 and 46 are therefore allowable.

### CONCLUSION

Applicant respectfully submits that all claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 349-9587 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

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16 Oct '06

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**CERTIFICATE UNDER 37 CFR 1.8:** The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 16 day of October 2006.

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